

CLAIMS

THAT CLAIMED IS:

1. A vehicle auxiliary power generating apparatus, comprising:
a housing adapted to be mounted to an exterior portion of a vehicle;
an auxiliary engine located in the housing;
an electrical generating device coupled to the auxiliary engine for generating electricity;
an electrically driven pump for providing a lubricant to the auxiliary engine, the pump being mounted exterior of the auxiliary engine and powered by the electrical generating device;
and
a lubricant filter fluidly located between the pump and the auxiliary engine for treating the lubricant.
2. The apparatus according to claim 1, further comprising a motor that is powered by the electrical generating device and is coupled to the pump for driving the pump.
3. The apparatus according to claim 1, wherein the auxiliary engine and electrical generating device are mounted to a mounting skid that is removable from the housing.
4. The apparatus according to claim 1, further comprising a removable mounting skid that releasably connects to a lower surface of the housing and supports the auxiliary engine.
5. The apparatus according to claim 1, wherein the electrical generating device generates DC electricity; and further comprising:

a motor that receives DC electricity from the electrical generating device and is coupled to the pump for driving the pump.

6. The apparatus according to claim 1, wherein the electrical generating device further comprises:

an alternator for generating DC electricity; and

an AC generator for generating AC electricity.

7. The apparatus according to claim 6, further comprising a motor that receives DC electricity from the alternator and is coupled to the pump for driving the pump

8. The apparatus according to claim 1, further comprising:

a compressor for compressing gaseous refrigerant;

a condenser in communication with the compressor for condensing the compressed refrigerant into a liquid refrigerant; and

an evaporator in fluid communication with the condenser for converting the liquid refrigerant into gaseous refrigerant, the evaporator being mounted adjacent the heater element so that air moved by the fan flows through the evaporator into the interior of the vehicle.

9. The apparatus according to claim 8, wherein the compressor is mechanically driven by the auxiliary engine.

10. A vehicle auxiliary power generating apparatus, comprising:

a housing adapted to be mounted to an exterior portion of a vehicle;

an auxiliary engine supported by the mounting skid within the housing;
a DC electrical generating device coupled to the auxiliary engine for generating DC electricity;
a motor mounted exterior of the auxiliary engine that receives electricity from the DC electrical generating device;
a pump for providing a lubricant to the auxiliary engine, the pump being driven by the motor; and
a lubricant filter fluidly located between the pump and the auxiliary engine for treating the lubricant.

11. The apparatus according to claim 10, further comprising an AC generator for generating AC electricity that is mechanically coupled to the auxiliary engine.

12. The apparatus according to claim 10, further comprising:

a compressor for compressing gaseous refrigerant that is mechanically driven by the auxiliary engine;

a condenser in communication with the compressor for condensing the compressed refrigerant into a liquid refrigerant; and

an evaporator in fluid communication with the condenser for converting the liquid refrigerant into gaseous refrigerant, the evaporator being mounted adjacent the heater element so that air moved by the fan flows through the evaporator into the interior of the vehicle.

13. A vehicle auxiliary power generating apparatus, comprising:

a housing adapted to be mounted to an exterior portion of a vehicle;

an auxiliary engine located in the housing;

a longitudinal member that extends substantially parallel to the lower surface of the housing when mounted within the housing;

a plurality lateral cross-members connected to the longitudinal member;

a plurality of fasteners extending through laterally outward portions of the lateral cross-members and for connecting the mounting skid to the housing; and

a plurality of threaded couplers extending through portions of the mounting skid that are laterally inward from the plurality of fasteners for connecting the auxiliary engine to the mounting skid.

14. The apparatus according to claim 13, wherein there are two longitudinal members that are spaced apart and substantially parallel to each other.

15. The apparatus according to claim 14, wherein the two longitudinal members are connected by the lateral cross-members.

16. The apparatus according to claim 13, further comprising an AC electrical generating device mounted to the mounting skid adjacent the auxiliary engine, and the plurality of threaded couplers also extend through portions of the mounting skid laterally inward of the plurality of fasteners for connecting the electrical generating device to the mounting skid.

17. The apparatus according to claim 13, further comprising:

a DC electrical generating device coupled to the auxiliary engine for generating DC electricity;

a motor mounted exterior of the auxiliary engine that receives electricity from the DC electrical generating device;

a pump for providing a lubricant to the auxiliary engine, the pump being driven by the motor; and

a lubricant filter fluidly located between the pump and the auxiliary engine for treating the lubricant.

18. The apparatus according to claim 13, further comprising:

a compressor for compressing gaseous refrigerant that is mechanically driven by the auxiliary engine;

a condenser in communication with the compressor for condensing the compressed refrigerant into a liquid refrigerant; and

an evaporator in fluid communication with the condenser for converting the liquid refrigerant into gaseous refrigerant, the evaporator being mounted adjacent the heater element so that air moved by the fan flows through the evaporator into the interior of the vehicle.